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Dr. Joshua Lederberg
President
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Dear Josh:

Many thanks for reviewing the Garrod essay and for the useful comments. Also for the reference to Burgio. I found it in the old-fashioned (and entertaining) way of looking at the new journals as they come in. You found it in a more efficient way.

I am looking for something better than Stent's statement which seems to be more a description than an explanation. The question is; why are concepts so hard to introduce? Why are current intellectual contexts so resistant to novelty? Garrod's ideas were clearly expressed, even posed in an old form, that of diathesis. So what are the factors that prevent people from grasping a new idea. No doubt they are many; some cognitive, some physiological, some cultural. Just now I'm reading (struggling with) Toulmin's "Human Understanding." Very illuminating. I'd welcome other suggestions.

I'm interested in this for reasons other than Garrod. In teaching genetics to medical students I've observed that while they get the details, they seldom get the point. They just don't see human variability as a crucial element in disease. Part of the reason is that their teaching is mainly typological; the preclinical teachers are concerned with mechanisms, the clinicians with pathogenesis, and the medical geneticists don't help by contriving (often against their will) to send out the message that genetics is a subspecialty rather than a liberating point of view. So I've been working lately on two things. One is to make explicit the central, basic role of genetic variation in disease beyond the inborn errors and the other is to collect data for a history of medical genetics in which the ways in which genetics has crept (is creeping) into medicine will be reviewed. Apropos of the first aim I've been working on a book, the general theme of which is that the genetic contribution to disease tends to decline throughout the life of, say, a cohort of individuals, and that this has some very practical consequences as to frequency, symptomatology, pathogenesis, diagnosis, treatment and prevention, both between diseases and within. This approach, however obvious and congenial to geneticists, hasn't been taken before in medicine.

So I hope it will be possible to continue the correspondence as things of mutual interest arise. I don't mean to put Garrod aside; his case is the most clear cut in connection with the issue of conceptual change. Toulmin, for

example, is scornful of Kuhnian revolutions, preferring an evolutionary view — which strikes me as more suitable for examining the way in which Garrod's idea of chemical individuality worked its way into the genetic and medical lore.

So thanks for your interest and encouragement.

With best regards,

Yours very truly,

Barton

Barton Childs, M.D.
Professor Emeritus

BC:ep